Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/FR2004/000209	International filing date *(day/month/year)* 30.01.2004	Priority date *(day/month/year)* 05.02.2003
International Patent Classification (IPC) or national classification and IPC C21 D8/02 C21 D1/18		
Applicant USINOR et al		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
   a. ☐ *(sent to the applicant and to the International Bureau)* a total of _____ sheets, as follows:
      ☐ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
      ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
   b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s))
      _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items:

☒	Box No. I	Basis of the report
☐	Box No. II	Priority
☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
☐	Box No. IV	Lack of unity of invention
☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
☐	Box No. VI	Certain documents cited
☐	Box No. VII	Certain defects in the international application
☐	Box No. VIII	Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP Facsimile No.	Authorized officer Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/FR2004/000209

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:

☐ international search (Rule 12.3 and 23.1(b))

☐ publication of the international application (Rule 12.4)

☐ international preliminary examination (Rule 55.2 and/or 55.3)

2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☐ the international application as originally filed/furnished

☒ the description:

pages 1-10 as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☒ the claims:

nos. 1-22 as originally filed/furnished

nos.* _____ as amended (together with any statement) under Article 19

nos.* _____ received by this Authority on _____

nos.* _____ received by this Authority on _____

☒ the drawings:

sheets 1/1 as originally filed/furnished

sheets* _____ received by this Authority on _____

sheets* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing *(specify)*: _____

☐ any table(s) related to sequence listing *(specify)*: _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages _____

☐ the claims, nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing *(specify)*: _____

☐ any table(s) related to sequence listing *(specify)*: _____

* *If item 4 applies, some or all of those sheets may be marked "superseded."*

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/FR2004/000209

Box No. V **Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	2, 14	YES
	Claims	1, 3-10, 13, 15-17, 20-22	NO
Inventive step (IS)	Claims	2, 14	YES
	Claims	1, 3-10, 13, 15-17, 20-22	NO
Industrial applicability (IA)	Claims	1-22	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

1. D1 states that it is possible to improve the average r-value and the tensile strength of a two-phased ferritic steel with "low temperature transformation phases" (in which case a martensitic phase is not excluded) with less than 10 wt.% of said phases (see D1, claim 1), by following the same steps as those claimed, namely regulating the carbon in solid solution by regulating the winding temperature (see D1, column 7, lines 11 to 37), i.e. winding at high temperature, and by monitoring continuous annealing in the intercritical region (D1, column 8, lines 4 to 21 and column 8 line 32 to 55).
With regard to the transformation of the phases created after cold-rolling (D1, claim 1 and example: 75 %), the critical factor in the creation of said phases is rapid cooling and not overaging.

2. Even though the composition of the examples does not correspond to the content of claim 1 (in general, the composition of the basic steel overlaps the one claimed, the only difference being Cr, which can be considered an impurity, at least for the values 0.01 %pp), the product prior to overaging both in D1

and according to the application has good tensile strength (table 2; combination TS-r), i.e. at least 450 Mpa (see D1, example, steel A).

It should be noted that the overaging temper is optional in D1 to improve the property referred to as "bake hardenability".

The participation of Cr does not appear to involve an inventive step, given that Cr is a ferrite-producing element and is not harmful to the structure.

3. DEPENDENT CLAIMS 2 to 10, 13 to 15 and 18 to 22

With the exception of claims 2 and 14, the above-mentioned claims contain no features which, when combined with the features of claim 1, comply with the PCT requirements of inventive step (PCT Article 33(3)), because the features are known from D1.

4. DEPENDENT CLAIMS 2 and 14

The features of claims 2 and 14 are not found in the prior art and cannot be derived in an obvious manner therefrom, because a steel with a high Mn content is not preferred in D1.

In these contexts, modifications to the ranges of C and Mn contents in claim 1 would be sufficient to justify an inventive step (PCT Article 33(3)), taking the following objection into account for the products.

5. DEPENDENT CLAIMS 13 and 22

Claims 13, 15 to 17 and 20 to 22 characterise products defined by their manufacturing method, but these products are known *per se*. D2, which is considered to be the most relevant prior art, describes steels

Box No. V — Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

having properties (tables 5 to 8) as defined in said claims.

A product does not become novel merely by virtue of being obtained by another manufacturing method (D2 is not relevant for the method) and the product as such must meet the requirements of patentability, which is not currently the case. In particular, **example 10** (tables 1, 2, 3 and 4) discloses a martensite-ferritic structure containing 12 % martensite and having good mechanical properties (all the properties according to claims 15, 16 etc. are already present). These claims should be amended.